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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during April, 1885, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic ocean during the month are also given, and their approximate paths shown on chart i.

The number of atmospheric depressions traced on chart i. and described under "Areas of low barometer" is eight, the average number for April during the last twelve years being 10.8.

The weather over the north Atlantic ocean during April, 1885, was generally moderate and without noteworthy features, except during the prevalence of the storms described as numbers 1 and 6, under "North Atlantic Storms."

The ice-region has extended unusually far to the eastward during this month, icebergs having been observed near W. 39°.

The mean temperature, as compared with the normal, exhibits no marked departure; on the Pacific coast and in the Rocky mountain districts it has been above the normal while to the eastward slight departures, both above and below the the normal are shown.

The precipitation has been decidedly below the average in the south Atlantic and east Gulf states, Tennessee, the northern plateau and north Pacific coast region; it has been largely in excess of the average in the lower Missouri valley and west Gulf states.

Tornadoes and local storms were more numerous than in the preceding month, those occurring in the southwestern states from the 19th to 22d being the severest reported. Storms of this character for the year 1885, thus far, have been neither so destructive nor so frequent as in former years.

As a result of the heavy rainfall in the southwestern states destructive freshets occurred, causing much damage to crops and loss of stock.

The spring season has been from two to four weeks later than usual in the Mississippi valley and to the eastward; in the Rocky mountain districts and on the Pacific coast the season has been unusually advanced.

In the preparation of this REVIEW the following data, received up to May 20th, 1885, have been used, viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and twenty-nine Signal Service stations and nineteen Canadian stations, as telegraphed to this office; one hundred and seventy monthly journals and one hundred and sixty-one monthly means from the former, and nineteen monthly means from the latter; three hundred and five monthly registers from voluntary observers; forty-four monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly reports from the New England Meteorological Society, and from the local weather services of Alabama, Georgia, Indiana, Minnesota, Missouri, Nebraska, Ohio, and Tennessee, and of the Central Pacific Railway Company; trustworthy newspaper extracts; and special reports.

ATMOSPHERIC PRESSURE.

[*Expressed in inches and hundredths.*]

The distribution of mean atmospheric pressure for April, 1885, determined from the tri-daily telegraphic observations of the Signal Service, is shown by the isobarometric lines on chart ii.

The mean atmospheric pressure is greatest on the north Pacific coast and in the south Atlantic states, where it ranges from 30.04 to 30.08; the barometric means are 29.95 or below over the central and southern Rocky mountain districts, British Northwest Territory, northern New England, and the Canadian Maritime Provinces; in the Rio Grande valley, southern Arizona, and over a portion of Utah the pressure is 29.9 or slightly below. Over the extensive area from the Atlantic coast between Massachusetts and North Carolina, northwestward to the north Pacific coast the mean pressures range from 29.98 to 30.08.

Compared with the mean pressures for March, there has been a slight increase (from .01 to .04) in the lower lake region, New England, and the Maritime Provinces, while in all other districts a decrease is shown. The difference is very slight along the Atlantic coast, while in all districts to the west of the Mississippi river, the mean pressure is more than .10 lower than for March, and in the Rocky mountain districts the decrease ranges from .20 to .30.

The departures from the normal pressure for April are given in the table of miscellaneous meteorological data and are also exhibited on chart iv. by lines connecting stations of equal departure. In the extreme northwest, the northern and middle plateau districts, and in California, the mean pressure is slightly below the normal, the departures ranging from .01 to .06; in all other districts the mean pressure is above the normal, the departures being less than .05, except in the lower lake region, the Atlantic coast districts, and the north Pacific coast region, where they vary from .05 to .10.

BAROMETRIC RANGES.

The monthly barometric ranges for the various Signal Service stations are given in the table of miscellaneous meteorological data; they were greatest in New England and least in the southern districts; over nearly the entire country the ranges were from .50 to .90; the greatest, 1.31 and 1.35, occurred at Boston, Massachusetts, and Block Island, Rhode Island, respectively; the least, 0.27 and 0.39, occurred at Key West, Florida, and San Diego, California, respectively.

AREAS OF HIGH BAROMETER.

Eight areas of high barometer have been traced over the territory occupied by the stations of observation, by the ap-